College Student Retention: An Exploration of the Relationship Between Self-Efficacy Beliefs and Purpose in Life Among College Students

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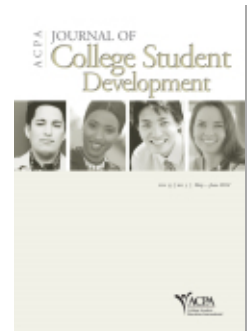
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We investigated the association between Frankl's (1985, 1988) construct of purpose in life with Bandura's (1977, 1997) theory of self-efficacy as a possible predictor of students who may be at risk for leaving school. For this study, 344 undergraduate college students (233 females, 111 males; 76% White/Caucasian, 10% Asian American/Asian, 7% African American/African, 5% multiracial/multicultural or other, 2% non-White/Hispanic; 79% freshmen, 13% sophomores, 4% juniors, 3% seniors, 1% unspecified grade/year level) completed the Purpose in Life Test, Part A (Crumbaugh & Maholick, 1964); the College Self-Efficacy Inventory (Solberg, O'Brien, Villarreal, Kennel, & Davis, 1993); the Scale of Perceived Social Self-Efficacy (Smith & Betz, 2000); the General Self-Efficacy Subscale of the Self-Efficacy Scale (Sherer et al., 1982); and finally, the Marlowe-Crowne Social Desirability Scale (Crowne & Marlow, 1960). All of the variables of self-efficacy were significantly (p < .01) and positively correlated with purpose in life. Regression analysis revealed that general self-efficacy was the most significant predictor of Purpose in Life scores. The current study lends support to the idea of creating interventions based on self-efficacy theory in order to positively influence students' subjective sense of purpose in life for the purpose of improving college student retention.

In "Five Reasons to Skip College" the writers at Forbes.com (Forbes Staff, 2006) have suggested that dropping out of college is a lifestyle alternative. They have suggested that dropouts could sock away that college tuition and manage their wealth. Many successful people, they have reminded us, never graduated from college. The Forbes.com litmus paper test, of course, is intelligence. Individuals like Bill Gates, Larry Ellison, and Allan Gerry are intelligent and did well for themselves without college degrees. In at least one area (i.e., entre-preneurship) these individuals appear to share high levels of self-efficacy.

Self-efficacy is defined as individuals' confidence in their ability to successfully complete a task. Self-efficacy and *goal orientation* (defined as students' reasons for approaching an academic task) have been linked to success in many areas, including college. Bandura suggested that "self-efficacy beliefs are rooted in the core belief that one has the power to produce desired effects" (Bandura & Locke, 2003, p. 87). Other factors also contribute to a student's success, such as greater self-efficacy in college-related tasks.

The opportunity, the means, and the motivation converge on a college campus where first-year students often struggle to incorporate those three variables and numerous other

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variables into a new developing self—a college self. In the literature, college success is somewhat narrowly defined.

Tinto's (1975) model of student attrition—the one most often cited in the literature—simply explains what is required of students if they expect to be able to persist and graduate. Tinto posited that persistence and withdrawal behavior is a longitudinal process that is primarily influenced by how well the student fits into the structure, social and academic life, and goals of the institution. Student experiences during the first year have more influence on retention than the characteristics they bring to the university (Tinto). Additional models attempt to predict student retention (e.g., Aitkin, 1982; Bean, 1982; DesJardens, Ahlburg, & McCall, 1999; Terenzini & Pascarella, 1977); however, none of them, including Tinto's model, are particularly helpful to college personnel when they meet with students. College career counselors, advisors, and mental health counselors could benefit from having a better idea of the ways in which they could positively influence student retention.

In examining student attrition, researchers can view students as individuals or students as a group. In looking at individual students who may be at risk for dropping out of college, the number of variables that can affect a student's decision to stay or leave is often related to the individual. Models of attrition help college personnel see group characteristics that affect students' decisions to persist in or withdrawal from college.

Tinto's Model of Fit, Integration, and Commitment

Like Occam's Razor, Tinto's (1975) model shaves off individual variables and presents a global perspective of retention. If the student fits the university's social and academic structure, integrates into academic and social life and shows commitment to the university and to graduating, the likelihood of graduation is greater. Tinto's elegantly simple model fits almost any student who leaves college. Unfortunately, in many cases, the numerous additional variables have the most profound effect on students, particularly first-year students. Tinto's model, although predictive, offers little in practical suggestions for influencing individual students.

Those individual variables are probably the most important variables related to a student's assimilation into college life. Unfortunately, many first-year students never return for a second year (Tinto, 1975) and counselors do not have the opportunity to assist students before they leave the university.

Individual Variables that Affect Student Decisions to Persist

Many of the reasons that students leave college are outside Tinto's model: finances, poor academic performance, lack of family or social/emotional encouragement, difficult personal adjustment and integration into the college social and academic community, and/or "fit" with the university, and feelings of isolation and helplessness (Allen, 1999; Bean, 1990; Cabrera, Stampen, & Hansen, 1990; Elliot, 1999; Hoyt & Winn, 2004; Kealy & Rockel, 1987; Pascarella & Terenzini, 1980, 1983; Pittman & Boggiano, 1992; Raley, 2007; Terenzini & Pascarella, 1977). The transition to college begins in high school.

High school GPA as a predictor of student persistence. High school GPA, for example, is a predictor of college success. Precollege academic performance has been shown to be a constant predictor for both minority students and nonminority students (Nora & Cabrera, 1996). Students with lower high school GPAs may have a more difficult time meeting the academic expectations of college. They may also find it difficult to strike a balance between

completing homework and developing social relationships.

Support as a predictor of student persistence. For first-year college students, involvement in meaningful activities outside of classes is an important transitional step (Kuh, Kinzie, Schuh, & Whitt, 2005), in part because the activities may help students develop connections with their peers (Yarzedjian, Purswell, Sevin, & Toews, 2007). Family support, interest, and encouragement can help students persist (e.g., Bean, 1982; Cabrera, Nora, & Castenada, 1993; Cabrera, Stampen, & Hansen, 1990). Faculty support, when it is lacking, can contribute to a student's feeling of isolation (Raley, 2007).

Motivation as a Predictor of Student Persistence. Several studies have shown student motivation to be a strong predictor of persistence (Ames & Ames, 1984; Caraway, Tucker, Reinke, & Hall, 2003; Dweck, 1986; Elliot, 1999). However, it is not always easy for students to set certain types of goals. For example, students may have difficulty setting "social integration goals" and yet, social and academic integration is an important component of transitioning from high school to college (Kuh, Kinzie, Schuh, & Whitt, 2005). Students with clearer defined academic and social goals typically experience a smoother transition into college life.

Coping Strategies as a Predictor of Student Persistence. To transition to college and persist, students must learn strategies that help them transform into college students (Roe Clark, 2005; with all that entails and whatever those strategies are). They must shed their high school approach to classes, friends, and teachers. They must somehow become persistent, goal-setting, self-starters who see college as important, integrate into the academic and social part of college, and persist toward a degree. In addition, to become successful in college, students must learn how to manage their independence (Kirst, 2004; Smith & Wertlieb, 2005). Transitioning from being a high school student to a college student is not an easy journey, particularly if the student is less well-prepared.

In their work with students who considered leaving college, researchers noted many students described dissatisfaction with their college social life and experiences (Freeman et al., 2007; Raley, 2007). Students who had thoughts of leaving college described little or no connection with their institution and felt like no one would help them (Freeman, Hall, & Bresciani). There are gaps in the literature, however, that describe the processes students must undertake to transform themselves from high school senior to college freshman (Raley).

A college student can feel a fit with the institution, a fit with peers, feel supported by faculty and by students, but without a purpose or goals, the student may lack a clear sense of personal meaning. What is the advantage of "fit" if life has no purpose?

Feeling little hope and seeing few options squares with Viktor Frankl's construct of the need for purpose in life. Frankl (1985) put forth that without a sense of meaning, an individual experiences existential vacuum. He estimated that among American college students, approximately 60% had experienced significant levels of existential vacuum (Frankl, 1988). Self-efficacy beliefs may be connected to the development and strength of an individual's feelings of purpose in life.

Theoretical Constructs: Frankl and Bandura

Viktor Frankl's Construct of Purpose in Life. Frankl (1985) put forth that without a sense of meaning, an individual would experience existential vacuum. Existential vacuum, according to Frankl, is primarily manifested as boredom and to a more extreme extent, distress

or anxiety and may even lead to suicide. An existential vacuum for students is particularly problematic in modern times as values and traditions become less clear (Frankl, 1988).

Frankl looked at life with two lenses. He first saw a kind of *universal* meaning in all of people's lives. He also saw a very *individual* meaning in each situation in life. Each individual has the freedom of choice—even in situations where there appears to be no choice. The inner freedom people have challenges them to assume responsibility for their actions. Each situation in life has its own meaning. It is up to each person to search for his or her sense of purpose. To assist individuals in their searches for meaning, Frankl (1985, 1988) developed logotherapy as a system for understanding how people create and maintain meaning in their lives.

Based on logotherapy (Frankl, 1985), individuals find meaning in three primary ways. First, individuals can find meaning by creating a product (broadly defined) or doing something of personal significance while engaged in work, school, or other daily activities. Individuals may also find meaning by experiencing or encountering something or someone (e.g., through their social relationships). The third approach for finding meaning addresses how individuals cope with and, one would hope, overcome suffering.

Logotherapy is explicit about the behavioral domains by which individuals gain and maintain meaning. However, logotherapy is considerably less clear with regard to understanding whether individuals are *likely* to approach, persist at, or perform those behaviors. On the other hand, Bandura's (1977, 1997) theory of self-efficacy has proven to be a powerful construct for better understanding the dynamics of human behavior.

Bandura's Theory of Self-Efficacy. According to Bandura (1977, 1997), an individual may gain a greater sense of self-efficacy from four informational sources: (a) performance accomplishments, (b) vicarious learning, (c) social persuasion, and (d) emotional arousal. Performance accomplishment is based on an individual's past success in performing a task or behavior. Vicarious learning takes place when an individual observes and learns from the behaviors of others. Social persuasion suggests that if others give an individual reinforcement for a behavior, then he or she is likely to have higher self-efficacy for that behavior. A final source influencing self-efficacy beliefs is physiological and affective states. Bandura (1997) indicated that emotional/somatic information is especially significant for behaviors involving health functioning, coping with stressors, and physical accomplishments.

The three primary behavioral outcomes influenced by self-efficacy beliefs are: (a) approach versus avoidance, (b) performance, and (c) persistence (Bandura, 1977, 1997). An individual with high self-efficacy for a particular behavior is more likely to approach, better perform, and persist at that behavior. On the other hand, an individual with low self-efficacy for a specific behavior is less likely to experience those behavioral outcomes. Students with greater self-efficacy for behaviors important to college life are more likely to experience greater success during their college experience.

Self-Efficacy and Retention. Bandura suggested that "self-efficacy beliefs are rooted in the core belief that one has the power to produce desired effects" (Bandura & Locke, 2003, p. 87). Self-efficacy serves as a robust theory in explaining and predicting student academic performance (Lent & Hackett, 1987; Siegel, Galassi, & Ware, 1985). In a meta-analysis, Moulton, Brown, and Lent (1991) found statistically significant relationships between self-efficacy beliefs, academic

performance, and outcomes. Individuals with stronger self-efficacy beliefs performed better and persisted longer at a variety of academic behaviors. Self-efficacy beliefs have also been correlated with goal selection. Students with weaker self-efficacy beliefs may choose goals that undermine their success (Hsieh [Pei-Hsuan], Sullivan, & Gurerra, 2007). Self-efficacy theory offers a route to creating interventions that could assist college personnel in their efforts to positively influence the retention and work of students.

Malleability. Fortunately, self-efficacy is malleable. Cervone and Peake (1986) increased or decreased self-efficacy beliefs in participants by selecting a randomly high or low number rating performance. Participants with artificially induced high ratings of self-efficacy persevered on unsolvable problems longer than their peers with lower self-efficacy ratings (Cervone & Peake). Efficacy beliefs change over time within the same individual based on the perceived success or failure of the tasks performed. Feelings of self-efficacy can be affected by success or even by trivial factors (Bandura & Locke, 2003). Because self-efficacy is malleable, it can become a tool for college personnel.

Without the support of decades of research on the behaviors associated with successful transition from high school senior to college freshman and the limited descriptions on how students define college success (Yarzedjian, Purswell, Sevin, & Toews, 2007), we chose assessment tools that can connect Frankl's (1985, 1988) construct of purpose in life and Bandura's (1977, 1997) theory of self-efficacy and provide useful information to college personnel and other researchers. The associations between self-efficacy beliefs and purpose in life are not found in the research literature, yet we posited that the measures derived from these constructs may assist college personnel in the identification of students who may be at higher risk for leaving college.

Purpose

We investigated the connection between the construct of purpose in life as conceptualized by Frankl (1988) and how, together with measures of Bandura's theory of self-efficacy, struggling first-year students might be identified and assisted with their transition through the administration and interpretation of assessments available to college counselors. These assessments may provide useful information that could be incorporated into counseling interventions. To date we found no studies where the researchers had combined the theories of purpose in life and self-efficacy in a college or university setting.

We designed the current study for initial exploration regarding the relationship between various kinds of self-efficacy beliefs and purpose in life in a college student population. We hypothesized that self-efficacy beliefs relevant to college students are significantly associated with purpose in life. An exploration of the combination of the measurement of these two constructs may assist college personnel in the identification of students at risk for dropping out. The study was guided by four hypotheses:

1. All three forms of self-efficacy (i.e., college, social, and general) are significantly and positively associated with purpose in life.

2. General self-efficacy accounts for the greatest variance in purpose in life.

3. Individuals scoring the highest on the measures of self-efficacy (i.e., college, social, and general) will report significantly stronger purpose in life than those scoring lower on self-efficacy.

4. Social desirability is not significantly associated with reports of purpose in life.

TABLE 1.
Test-Retest Reliability for Purpose-In-Life Test

Study	Year	Time	Coefficient	*N* Description
Meier & Edwards	1974	1 week	.84	57 church members
Reker & Cousins	1979	6 weeks	.79	31 college students
Reker	1977	12 weeks	.68	17 penitentiary inmates

Further, we posited that the assessment package used in this study (see Instruments section) could assist counselors in predicting first-year students who might consider leaving school.

METHOD

Participants

The participants were 344 undergraduate students enrolled in an introductory psychology course at a large Midwestern university. In every introductory course offered at the university, students had the opportunity to participate in several research projects and participation was always voluntary. Other than a small number of extra credit points offered for participation in any research project within the university, students received no compensation.

Demographic data revealed that 68% of participants (*n* = 233) were female and 32% (*n* = 111) were male, ranging in age from 16 to 42 with a mean age of 19 years old, and fully 99% indicated their partnership status as single/unmarried. Most (76.2%; *n* = 262) identified as White/Caucasian, 9.6% (*n* = 33) as Asian American/Asian, 7.3% (*n* = 25) as African American/African, 4.9% (*n* = 17) as multiracial/multicultural or other, and 2% (*n* = 7) as non-White/Hispanic. The majority (79.3%; *n* = 273) were freshmen, 13.1% (*n* = 45) were sophomores, 4.1% (*n* = 14) were juniors, and 3.2% (*n* = 11) were seniors, with

the remaining 0.3% (*n* = 1) failing to specify grade/year level.

Instruments

These specific tests were chosen for several reasons: They are reliable, easily available to college personnel, easy to administer, and they require a minimal amount of time to complete. Finally, this combination of tests could be used as a package if the study demonstrated positive results.

Purpose-In-Life Test, Part A. The Purpose in Life Test (PIL) consists of 20 items assessing a person's subjective, global sense of having purpose or meaning in his or her life (Crumbaugh & Maholick, 1964).

Items include:

"I am usually: *Completely bored*, through *Exuberant and enthusiastic*."

"After retiring I would: *Loaf completely for the rest of my life*, through *Do some of the things I've always wanted to do*."

"My personal existence is: *Utterly meaningless, without purpose*, through *Very purposeful, meaningful*" (Crumbaugh & Maholick, 1964).

Item responses are obtained using a 7-point Likert-type scale ranging from 1 to 7 (specific statements between 1 through 7 vary from item to item). Total scores of the PIL are obtained by summing the responses on the 20 items. Total scores can range from 20 to 140;

higher scores reflect a greater sense of purpose in life. A greater sense of purpose tends to entail a stronger belief in the significance of one's existence and behaviors.

Test-retest reliability is high. Hutzell (1988) reported split-half reliability coefficients ranging from .87 to .92 (Spearman-Brown corrected). Test-retest reliability yielded the data found in Table 1. An alpha of .89 for internal consistency of the measure was achieved in the current study.

Ebersole and Quiring (1988) suggested that the PIL contained a social desirability response. They calculated a correlation of .33 (*N* = 130) and .37 (*N* = 105) between the PIL and the Marlowe-Crowne Social Desirability Scale (MCSDS) (Crowne & Marlowe, 1960) for samples from 1984 and 1987 respectively.

Individuals completing the PIL tended to show a desire to answer in a socially desirable fashion. According to Ebersole and Quiring (1988) these correlations were moderate, however they were statistically significant. We decided to validate the possibility of a social desirability response set in the current research. Students completed the Marlowe-Crowne Social Desirability Scale, which is described later in this section, last in the series of assessment.

College Self-Efficacy Inventory. The College Self-Efficacy Inventory (CSEI) consists of 22 items related to different areas of college life (i.e., courses, roommates, and social situations) assessing an individual's sense of perceived college self-efficacy (Solberg, O'Brien, Villarreal, Kennel, & Davis, 1993). Thirteen questions relate to academic work (e.g., "Talk to your professors and instructors"; "Take good class notes"; "Manage your time effectively"; "Do well on exams"; or "Go to the library"; Solberg et al.). Nine questions focus on the social aspects of college life (e.g., "Get a date if you want one"; "Divide chores with others you live with"; "Join an intramural sports team"; "Socialize with others you live with"; Solberg et al.).

Item responses are obtained using a 9-point Likert-type scale ranging from 0 (*totally unconfident*) to 8 (*totally confident).* Total scores of the CSEI are obtained by summing the responses on the 22 items. Total scores can range from 0 to 176. Higher total scores reflect a greater sense of college self-efficacy.

Internal consistency reliability was strong (alpha = .93) for the measure (Solberg et al., 1993). An alpha of .91 was achieved in the current study.

Scale of Perceived Social Self-Efficacy. The Scale of Perceived Social Self-Efficacy (PSSE) consists of 25 items assessing an individual's perceived social self-efficacy (Smith & Betz, 2000). Using a 5-point Likert-type scale ranging from 1 (*no confidence at all*) to 5 (*complete confidence*), participants assessed their confidence with a variety of social behaviors (e.g., "How much confidence do you have that you could: start a conversation with someone you don't know very well; volunteer to help organize an event; ask a group of people who are planning to engage in a social activity, such as going to a movie, if you can join them; express your feelings to another person or ask someone out after he/she was busy the first time you asked"; Smith & Betz). Total scores on the PSSE are obtained by summing the responses on the 25 items. Total scores can range from 25 to 125. Higher scores reflect a greater sense of perceived social self-efficacy. Smith and Betz (2000) reported strong internal consistency reliability (alpha = .94). An alpha of .95 was achieved in the current study.

Although Bandura (1997) focused on the idea of self-efficacy beliefs being attached to specific tasks and behaviors, others (i.e., Sherer, et al. 1982) suggested individuals can feel more generally confident while still feeling a lack

of confidence for a specific task. Individuals with higher general self-efficacy are typically more confident with a wider variety of tasks and approach new situations with greater confidence.

General Self-Efficacy Subscale (GSE) of the Self-Efficacy Scale. The General Self-Efficacy Subscale (GSE) consists of 17 items assessing an individual's subjective, global sense of general self-efficacy (e.g., "I give up on things before completing them"; "I avoid facing difficulties"; "Failure just makes me try harder"; "When I decide to do something, I go right to work on it"; "I am a self-reliant person"; Sherer et al., 1982).

General self-efficacy is likened to a global confidence in a variety of activities as opposed to confidence in specific behaviors. Individuals with a greater sense of general self-efficacy are more likely to approach, better perform, and persist at a wider variety of behaviors.

Item responses are obtained using a 5-point Likert-type scale ranging from A (*disagree strongly*) to E (*agree strongly*). Total scores of general self-efficacy are obtained by summing the 17 items of the subscale (11 items are reverse scored). Total scores can range from 17 to 85. Higher total scores reflect greater general self-efficacy. Sherer et al. (1982) reported internal consistency reliability of .86. An alpha of .86 was also achieved in the current study.

Marlowe-Crowne Social Desirability Scale. The MCSDS consists of 33 items assessing an individual's likelihood of answering in a socially desirable fashion (Crowne & Marlowe, 1960). For example, "I have never intensely disliked anyone"; "I am always careful about my dress"; "I sometimes feel resentful when I don't get my way"; "I like to gossip at times"; Crowne & Marlowe). Item responses are obtained using an indication of true or false; 18 items are keyed true and 15 false.

Total scores are obtained by summing the 33 items in the direction they are keyed. Total scores can range from 33 to 66; higher total scores indicate a greater predisposition for social desirability responding. Crowne and Marlowe (1960) reported an internal consistency reliability of .88 and a one-month test-retest reliability of .89. An internal consistency of .73 was achieved in the current study.

Procedure

As a part of every introductory psychology class, students were given many opportunities to participate in research studies throughout the university. Students were given a general description of the study and its format as they registered online to become participants.

Students chose a day and time for test administration. Tests were administered in a computer lab with 25 to 30 computers. As many as 25 participants could be scheduled for each time slot. This limit was based on the number of computers in the room.

Once participants were seated at a computer they were presented items systematically on a computer screen using the Psychological Inventory Generator computer program (PIG) (Bean, 2000) for data collection. For each item, participants either answered the item by indicating their answer choice using the computer's mouse or they left the item unanswered and advanced to the next item.

Items on the demographic questionnaire were presented first. Students completed the other instruments in the same order in which they are presented in the Instruments section. The version of the PIG computer program used at the time of this research was unable to accommodate counterbalancing or random presentation of the measures. The total time commitment for each participant was up to 20 minutes. Extra credit points for their grade in introductory psychology were awarded to participants at the beginning of the testing. If

students could not, for some reason, complete the tests, they still received extra credit points. All individuals who registered for these tests voluntarily completed the series.

Once the process was completed, each participant had the opportunity to debrief. During debriefing, which took approximately 5 minutes, the purpose of the study was explained, tests were described in greater detail, and any participant questions were freely answered. Each participant left with the contact information of the investigators. The entire process for participants took approximately 15 to 20 minutes.

RESULTS

We used several standard statistical tools in the analysis of our data. All of the measures had adequate internal reliability (see Instruments section). The results of the four tests showed no statistical differences between males and females on any of the variables. Table 2 shows means, standard deviations, and *t* test values for the purpose in life, self-efficacy, and social desirability variables by gender.

All the variables of self-efficacy were significantly and positively correlated with purpose in life. General self-efficacy was the most significant predictor for purpose in life. Individuals, regardless of gender, who scored higher on any of the three self-efficacy scales, also reported more purpose to their lives. In testing for social desirability, we found individuals who scored higher on the measure of purpose in life were likely to answer with social desirability in mind. Social desirability was correlated with the other three variables. To investigate this finding further, we analyzed the nature of the associations between social desirability and the three variables of self-efficacy. Individuals who scored higher on the measure of general self-efficacy were more likely to score higher on the measure of social desirability. There were no significant differences on the measure of social desirability between individuals who scored higher or lower on the variables of college or social self-efficacy. Males and females scored almost identically on measures of social desirability. Each hypothesis and detailed findings are found in the following tables.

Hypothesis 1

We explored our first hypothesis, that all three forms of self-efficacy are significantly and positively associated with purpose in life,

TABLE 2.
Means, Standard Deviations, and *t* Values for Males and Females
on the Measured Variables

Variable	Males[a]		Females[b]		t	p
	M	SD	M	SD		
Purpose in Life	107.9	13.6	110.0	13.1	1.38	.167
College Self-Efficacy	125.1	23.3	127.7	19.4	1.10	.272
Social Self-Efficacy	86.6	18.1	88.2	16.1	0.81	.419
General Self-Efficacy	64.4	9.0	64.5	8.7	0.09	.927
Social Desirability	45.9	3.6	45.8	3.4	−0.36	.717

[a] *n* = 111.   [b] *n* = 233.

TABLE 3.

Correlations Among Self-Efficacy, Purpose in Life, and Social Desirability Scores

Variable	1	2	3	4	5
1. Purpose in Life	—	.59**	.53**	.64**	.31**
2. College Self-Efficacy		—	.76**	.65**	.26**
3. Social Self-Efficacy			—	.51**	.22**
4. General Self-Efficacy				—	.41**
5. Social Desirability					—

Note. Participants ($N = 344$).

** $p < .01$.

using correlational analysis for testing the strength and direction of the relationships, and it was clearly supported by the data. All of the variables of self-efficacy were significantly ($p < .01$) and positively correlated with purpose in life; higher levels of self-efficacy were significantly associated with reports of greater purpose in life as seen in Table 3.

Hypothesis 2

In support of our second hypothesis (general self-efficacy accounts for the greatest variance in reports of purpose in life), regression analysis revealed that general self-efficacy emerged as the most significant predictor of purpose in life, accounting for 41% of the variance. The hierarchical regression results shown in Table 4

further revealed that when entered after general self-efficacy, both college and social self-efficacy accounted for modest, but significant, unique, additional variance in purpose in life. College self-efficacy accounted for an additional 5% of the variance in purpose in life, whereas social self-efficacy accounted for an additional 1% of the variance. The addition of social desirability into the hierarchical regression did not contribute significantly to the overall model.

Hypothesis 3

We hypothesized that individuals scoring the highest on the measures of self-efficacy are likely to report significantly stronger purpose in life than those scoring lower on self-efficacy.

TABLE 4.

Model Summary of Hierarchical Regression Analysis for the Prediction of Purpose in Life

Variable	B	*F* Change	*F**	*R*	R^2
General Self-Efficacy	.673	235.33	< .001	.638	.408
College Self-Efficacy	.190	32.26	< .001	.677	.459
Social Self-Efficacy	.133	7.80	.006	.686	.471
Social Desirability	.098	0.39	.531	.687	.472

Notes. *F** = Significance of *F* Change. R^2 = Adjusted R^2.

So, to explore high and low self-efficacy groups, we computed analyses of variance comparing participants scoring in the upper 30% and lower 30% on each of the three self-efficacy scales with overall purpose in life. Based on *t* tests that indicated no significant differences between males and females in any of the upper or lower groups of the variables being analyzed, gender was not included as an independent variable in the ANOVAs. The ANOVAs revealed, in support of the third hypothesis, that there were significant differences in reported life meaning between the upper and lower self-efficacy groups (see Table 5). Individuals scoring higher on any of the three self-efficacy measures also reported significantly more purpose in their lives.

Hypothesis 4

Contrary to the fourth hypothesis, that social desirability is not significantly associated with reports of purpose in life, social desirability was found to be modestly, although significantly, correlated to purpose in life. Individuals scoring higher on the measure of purpose in life appeared to display a significant likelihood to answer in a more socially desirable manner. Furthermore, social desirability was also found to be correlated with the other three variables of self-efficacy (see Table 3).

In light of these findings, the decision was made to carry out additional, unplanned analyses to explore the nature of the associations between social desirability and the three variables of self-efficacy. Analyses of variance were calculated for determining significant differences in social desirability between the upper and lower groups of each self-efficacy variable. As *t* test results revealed no differences between males and females in the upper or lower groups for any of the variables of self-efficacy or social desirability, the gender of

TABLE 5.
ANOVA Results for Upper and Lower Self-Efficacy Groups for Purpose in Life

Variable	*n*	*M*[a]	*SD*[a]	*F*	*p*
General Self-Efficacy				123.42	< .001
Upper 30%	111	117.8	10.2		
Lower 30%	100	99.3	14.0		
College Self-Efficacy				117.56	< .001
Upper 30%	108	117.5	10.4		
Lower 30%	99	99.4	13.5		
Social Self-Efficacy				90.46	< .001
Upper 30%	109	116.7	9.9		
Lower 30%	102	100.8	14.3		
Social Desirability				6.02	.015
Upper 30%	109	112.4	12.3		
Lower 30%	78	107.7	13.6		

[a] *M* and *SD* scores for Purpose in Life Test.

TABLE 6.

ANOVA Results for Upper and Lower Self-Efficacy Groups for Social Desirability

Variable	n	M[a]	SD[a]	F	p
General Self-Efficacy				3.04	< .001
Upper 30%	111	50.2	4.7		
Lower 30%	100	45.8	4.8		
College Self-Efficacy				1.20	.178
Upper 30%	108	49.7	4.3		
Lower 30%	99	46.6	4.9		
Social Self-Efficacy				1.00	.487
Upper 30%	109	49.3	4.4		
Lower 30%	102	47.1	5.2		

[a] *M* and *SD* Scores for the Marlowe-Crowne Social Desirability Scale.

participants was not included as an independent variable.

The analyses of variance for exploring social desirability on each type of self-efficacy yielded mixed results. Analyses revealed a significant difference between the upper and lower groups on the variable of general self-efficacy for social desirability. Individuals scoring in the upper 30% on the GSE exhibited significantly higher mean scores on the measure of social desirability. We found no significant differences in mean scores of social desirability between individuals in the upper or lower 30% on the measures of social or college self-efficacy. Participants scoring higher or lower on social or college self-efficacy beliefs were not significantly different in their mean scores on social desirability (see Table 6).

DISCUSSION

The characteristics of students who successfully complete college are well documented (Allen, 1999; Bean, 1990; Cabrera, Stampen, & Hansen, 1990; Elliot, 1999; Hoyt & Winn, 2004; Kealy & Rockel, 1987; Pascarella & Terenzini, 1980, 1983; Pittman & Boggiano, 1992; Terenzini & Pascarella, 1977). Less research exists regarding the methods students use to transition from high school to college and how they react once they begin to become university students. As Tinto (1975) noted, attrition is a process. During the process, students exhibit signs of discontent or disassociation.

This study adds to the literature by describing the effects of a package of assessments designed to investigate feelings of self-efficacy and purpose in life. Correlational analyses demonstrated that self-efficacy beliefs were significantly and positively related with reports of purpose in life. As individuals' scores on college, social or general self-efficacy increased, their scores on purpose in life also tended to increase.

General self-efficacy was the most significant predictor for purpose in life. It accounted for 41% of the variance. This has implications in the classroom and in the dorm. Success feels good. Although we found some influence of

social desirability in the results, it was quite modest and had virtually no effect on the model.

The current study lends support to the idea of creating interventions based on self-efficacy theory to positively influence behaviors that improve or augment students' subjective sense of purpose in life. Other researchers have supported a direct association between self-efficacy beliefs and variables important for academic success such as persistence and performance (Moulton, Brown, & Lent, 1991) as well as college satisfaction (DeWitz & Walsh, 2002). Self-efficacy may also interact with other variables needed for academic success, such as purpose in life.

As with self-efficacy, previous research has also supported associations between purpose in life and variables of academic success such as GPA and mental ability (Martin & Martin, 1977). Furthermore, purpose in life is associated with variables that are likely to be indirectly useful for academic success, such as general enthusiasm (Walters & Klein, 1980) and anger management (Sappington & Kelly, 1995), as well as a higher internal locus of control and decreased depression (Phillips, 1980). The development of interventions based on self-efficacy theory could be instrumental in improving the behaviors associated with purpose in life and in turn creating a more positive college experience for students. For schools considering the use of several quick tests that can assist in the prediction of students who may be more prone to leaving school, the tests used in this study can help provide a generally reliable picture of students at risk for leaving. Administrators need not worry excessively about students answering questions the way they think the questions should be answered (social desirability), as this appears to have little impact on the utility of the results.

Although many students may have ex-tremely high levels of self-efficacy in multiple categories and may never have experienced existential vacuum, most college students are not like Bill Gates, Larry Ellison, and Allan Gerry. We suspect the advice from Forbes.com (skip college and manage your wealth) most likely came from a college graduate.

A few potential limitations should be noted when interpreting this research. This study was conducted at a large Midwestern university. With gender as an exception, demographics of the participants represented the demographics of the university. University demographics showed approximately equal numbers of males and females. Approximately two thirds of the participants in this study were female students. The racial demographic of this sample, although skewed toward Caucasians, was representative of the diversity at the university. Previous research looking at possible gender and racial differences regarding PIL scores revealed no significant differences. A 1985 study found no significant differences between Caucasians and African Americans on the variable of purpose in life (Coffield & Buckalew, 1985). Other researchers found no significant difference between male and female mean scores on the PIL (Meier & Edwards, 1974).

Another possible limitation of the study was the fact that only one measure of meaning in life was used: the PIL. Previous research has identified the PIL as being the most useful for exploring the construct of purpose in life, particularly in relation to Frankl's views. After investigation of two other inventories (i.e., Life Regard Index, Battista & Almond, 1973; and the Sense of Coherence Scale, Antonovsky, 1987), Chamberlain and Zika (1988) concluded that the PIL had the most utility for assessing meaning in life.

In terms of the other measures used in the study, we noted two important considerations. The first concern is regarding the relatively low internal consistency reliability calculated

for the MCSDS (α = .73). Previous research has reported an internal consistency of .88 (Crowne & Marlowe, 1960). Although we found a discrepancy between the two studies, it does not appear to have significantly impacted the results. Correlations between the PIL and social desirability were similar in this study (r = .31) to correlations in other studies (e.g., Ebersole & Quiring, 1988; r = .33 and .37). The second potential concern is related to the counterbalancing of the measures. All of the measures used were presented in the same order throughout the data collection phase of this study. The version of the software used in the data collection phase was not equipped to counterbalance measures. Because the MCSDS was the last measure presented to the participants, the lack of counterbalancing may account for some of the lower internal consistency reliability.

Future Research

Future research could go in several directions. Primarily, it would be useful to replicate this study, particularly with other populations and at other universities. Research with more diverse samples could provide additional insight into some ways for assisting individuals from underrepresented populations to enjoy greater success and well-being in higher education.

Future researchers may want to counterbalance these measures. More sophisticated computer software is available and is recommended for future replication studies.

We also suggest that researchers create and test possible interventions using self-efficacy theory to help individuals increase their sense of purpose in life. Previous research has demonstrated that interventions can be developed that influence self-efficacy beliefs (Betz & Schifano, 2000; Gist, Schwoerer, & Rosen, 1989; Lent, Brown, & Larkin, 1984). Students who undergo an increased sense of life purpose by boosting certain self-efficacy beliefs may experience better performance and a more satisfying college experience.

Research of an applied, experimental nature would also help substantiate a causal relationship between self-efficacy beliefs and purpose in life. Future research in the areas of self-efficacy beliefs, purpose in life and the nature of their associations could yield valuable information for those interested in understanding and improving the lives of students in higher education.

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